

COMPUTER IMAGE CORP.

SOFTWARE REVISIONS

SYSTEM 4

REVISION NUMBER: 2.4

RELEASE DATE: 4-Oct-82

(1)

DESCRIPTION OF CHANGES: Since Revs 2.2 & 2.3 were not released, this covers changes from Rev 2.1 to 2.4

1. Phase parameters take rotational fairings (or Phase linear or Hold) rather than non-rotational fairings.
2. ALL and Sn All (Sn is a permanent or alternate section name or geometric node name) accepted in all fairing, activate parameter, deactivate parameter, insert, group, merge, & move parameter commands (i.e. in all commands that take parameter lists).
3. Select intensity compensation (SEL_INTENS_CP). New parameter controls calculation of 9 intensity comp. factors, and also is part of the MISC_1 RPU parameter, where it controls hardware switches involved in intensity comp.
4. New parameters (FG1xFG2_AMP & FG2xFG3_AMP) control function generator combiner amplitude.
5. New value for FG_n_FRQ (MED-FREQ-H_SC), Code 001.
Ends up in RPU parameter CNTRLn in bits 10-8 (bit 0 = least significant)
6. New value for FG_5 or 6_FRQ (AUDIO). Ends up in RPU parameter MISC 1 in bits 12-11. (bit 12 = enable/disable AUDIO for FG 6, bit 11 = enable/disable AUDIO for FG 5.)
7. Changes 3-5 above caused a change in the RPU buffer length and therefore in the RPU controller program & the RPU address translation ROM.

(continued)

EFFECT ON OLD ANIMATION: Animation is automatically updated to be of the proper form for Rev 2.4 when the animator .GET's it, but may require re-animation in certain respects - e.g. Intensity compensation, phase fairings, combiner amplitudes.

EFFECT ON MANUAL (SECTION # EFFECTED): Manual will be revised to Rev 2.4.

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #):

RPUCTL.MS, ROM.MS, TERM4.MS, KEYCP.MS changed

Intensity comp. hardware

Audio hardware

Combiner amplitude MDAC's

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SOFTWARE REVISIONS

SYSTEM 4

REVISION NUMBER: 2.4

RELEASE DATE: 4-Oct-82

(2)

DESCRIPTION OF CHANGES:

8. Control panel communications (between Eclipse and control panel) improved.
Among other changes internal to the Eclipse software, the control panel command to Search & Clear blink field (TERM4.MS) was changed to start at the current cursor position & clear all blink fields to the end of the current line.

9. Playback compiler speed improved.

Example 1: VZAPIPE Scene C - 12 keyframes 313 active parameters (LKF=646)

Compile previously took 3:03 now takes 1:44

Example 2: VZASTAR Scene B - 21 keyframes 332 active parameters (LKF=684)

Compile previously took 5:49 now takes 2:25

EFFECT ON OLD ANIMATION:

EFFECT ON MANUAL (SECTION # EFFECTED):

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #):

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SOFTWARE REVISIONS

SYSTEM 4

6-Dec-82

REVISION NUMBER: 2.6

RELEASE DATE: _____

DESCRIPTION OF CHANGES:

1. Scale Intensity compensation up by a factor of 2 for better resolution on small things. Necessitates a hardware change in the RPU so that the intensity for a given animation won't change. No animation update required for this. Microcode program QRMIC.MS changed.
2. MAGNIFY-SIZE & VANISH-SIZE RPU parameters to be controlled by a single animation parameter named ZOOM. New switch table (S4CS.GT). New KEYCP.MS rom. Animation must be updated to Rev 2.6.
3. Updating animation is now done outside of SYSTEM4 by a program called UPDANIMATN. Trying to GET old animation will give the error message - "ANIMATION MUST BE UPDATED".

EFFECT ON OLD ANIMATION: Must be put through the UPDANIMATN program

EFFECT ON MANUAL (SECTION # EFFECTED): Yes.

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #): _____

KEYCP.MS

Intens. comp. hardware change. FCN 06 07 08

QRMIC.MS microcode program change

COMPUTER IMAGE CORP.

SOFTWARE REVISIONS

SYSTEM 4

21-Dec-82

REVISION NUMBER: 2.6

RELEASE DATE: _____

DESCRIPTION OF CHANGES:

- 1) Some switch names changed, some moved per spec. of Glenn Hill 16-Dec-82
- 2) Remote mode-protocol 2 implementation
 - New remote only switches (.CUE & .START)
 - System 4 program changes

EFFECT ON OLD ANIMATION: None

EFFECT ON MANUAL (SECTION # EFFECTED): both (1) & (2)

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #): _____

RCPDEB.MS, KEYCP.MS, TERMR.MS

S4CS.GT (Switch file)

SYSTEM4.SV, SYSTEM4.OL

COMPUTER IMAGE CORP.

SOFTWARE REVISIONS

SYSTEM 4

11-Feb-83

REVISION NUMBER: 2.6

RELEASE DATE: _____

DESCRIPTION OF CHANGES:

1. Note Facility: Notes can be appended to the Animation's note file (... .NT) in any mode.

Notes are printed with the .CONTROL mode .PRINT command.

2. Control Mode .PRINT options:

a) .PRINT₂ (default) - print all control structure info, inactive parameters, heirarchy, notes.

b) .PRINT .DEACT_PARAMS₂ - same as (a)

c) .PRINT .ACT_PARAMS₂ - as (a) but active parameters rather than inactive

d) .PRINT .NODE₂ - print heirarchy and notes

e) .PRINT .NOTE₂ - print notes

3. KEYCP.MS - .IN_RANGE changed to .NOTE

4. S4CS.GT (switch table) .IN_RANGE changed to .NOTE

5. DLTANIMATN, LDFROMTAPE, SAVONTAPE updated to handle note file.

EFFECT ON OLD ANIMATION: none

EFFECT ON MANUAL (SECTION # EFFECTED):

.NOTE

.PRINT

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #):

KEYCP.MS (KEYCP7)

COMPUTER IMAGE CORP.

SOFTWARE REVISIONS

SYSTEM 4

30-Mar-83

REVISION NUMBER: 2.7

RELEASE DATE: _____

DESCRIPTION OF CHANGES:

1. Run file names changed from ~<A-J>R to ~<A-J>G to prevent possible conflicts with ~.DR ~.ER files.

2. Inactive parameter table manager rewritten. Table format changed & a directory was added.

These changes require animation to be updated with UPDANIMATN, which was revised to update animation to Rev 2.7

3. Keyframes kept in PLAYBACK mode with .KEEP_IT now have lockout fairing symbols inserted for all parameters.

Archival storage & retrieval programs updated to handle new run file names and Inactive parameter file directory (~.ZT)

Distribution requires new: UPDANIMATN.<OL SV>

LDFROMTAPE.SV

SAVONTAPE.SV

DLTANIMATN.SV

EFFECT ON OLD ANIMATION: Requires updating with UPDANIMATN (Rev 2.7)

EFFECT ON MANUAL (SECTION # EFFECTED):

3 - description of .KEEP_IT

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #):

REVISION NUMBER: 2.8

6-Apr-83

RELEASE DATE:

DESCRIPTION OF CHANGES:

1. New default .SIZE & .INTENS to correspond to RPU hardware change.
2. Automatic remote protocol selection in playback mode.
3. New translation for the MAGNIFY-SIZE RPU parameter to correspond with hardware change.
4. "SKEW-XY" changed to "SKEW-YX"
5. New Animate mode functions - .SET-DEFAULT & .SET-VALUE
6. Capability to insert contents of a file into the input queue <filename>

EFFECT ON OLD ANIMATION: Needs to be updated with UPDANIMATN

EFFECT ON MANUAL (SECTION # EFFECTED):

- | | |
|---------|---------|
| 1 - yes | 5 - yes |
| 2 - yes | 6 - yes |
| 3 - no | |
| 4 - yes | |

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #):

- | | |
|--------------------------------------|-------------|
| 1 - RPUCTL16.MS, UPDANIMATN.<OLSV> | 5 - S4CS.QT |
| 2 - S4CS.SD, SYSTEM4.MC | |
| 3 - QRMIC.MS (microcode), RPUADR4.MS | |
| 4,5 - S4CS.GT, KEYCP8.MS | |

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SOFTWARE REVISIONS

SYSTEM 4

#2

REVISION NUMBER: 2.8

20-May-83

RELEASE DATE:

DESCRIPTION OF CHANGES:

1. .COMMAND_FILE creates a disk file of commands which can be used in the insert contents of a file facility.
2. bug in .INSERT didn't release memory correctly.
3. bug in .KEEPIT moved lockout pairings to incorrect places in the Keyframe
4. Switches re-arranged & 2 new switches added: .COMMAND_FILE & .SET_VALUE
5. Re-init after DMA test (RPU controller). Include initialization of DIM & VIDEO RATE in initializations
6. Switch file (S4CS.GT) re-organized - Now ordered by ASCII switch name. (27-May-83)

EFFECT ON OLD ANIMATION: none

EFFECT ON MANUAL (SECTION # EFFECTED):

1 - yes

2,3 - no

4 - yes

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #):

1 - S4CS.GT (switch table)

4 - S4CS.GT, KEYCP9.MS, KEYCOD2.MS

5 - RPUCTL17.MS

6 - S4CS.GT, KEYCP9.MS, TERM7.MS, KEYCOD2.MS

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SOFTWARE REVISIONS

SYSTEM 4

#3

REVISION NUMBER: 2.8

RELEASE DATE: 1-July-1983 Released to EDITEL

4-June-83

DESCRIPTION OF CHANGES:

1. RPUCTL18

- Change End-of-field interrupts to run off of 6840 counter #2 (FIRQ) to fix a rare timing problem which caused jitter
- Restore video-rate & dimension information on button reset

EFFECT ON OLD ANIMATION: none

EFFECT ON MANUAL (SECTION # EFFECTED): none

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #):

RPUCTL18.MS

COMPUTER IMAGE CORP.

SOFTWARE REVISIONS

SYSTEM 4

7/7/83

REVISION NUMBER: 2.8+

RELEASE DATE: 1-Aug-83 to RTL

DESCRIPTION OF CHANGES:

1. SAVONTAPE is now able to save animation in a directory other than the one that the program is run from. The directory name is not saved with the file names on the tape, nor is it printed on the tape label.

2. SMOOTH fairing implemented - SMOOTH switch defined.

3. Bug in making command files fixed. 14-July-83

4. Bug in executing command files fixed. 14-July-83

5. Bug in Manual-sectioning fixed. 15-July-83

6. Bug in Display-phase fixed. 18-July-83

7. Intensity comp calculations modified:

$$\text{INTENS(RPU)} = \text{INTENS(Picture)} * \text{SQRT(VANISH_SIZE)}(\text{RPU})$$

IC1-9 now multiplied by Q or P rather than Q^2 or $Q*P$

8. New default frame in RPUCTL 29-July-83 (Also A-overflow bug fixed)

EFFECT ON OLD ANIMATION:

EFFECT ON MANUAL (SECTION # EFFECTED):

1. Yes.

2. Yes

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #):

1. SAVONTAPE.SV

8. RPUCTL19.MS

2. SYSTEM4.<OLSV> S4CS.GT KEYCP10.MS

6. PPDPM.MS microcode

7. QRMIC.MS, INTNS.MS microcode, DLOADCS.MC, S4CS.SQ, SYSTEM4.MC

COMPUTER IMAGE CORP.

SOFTWARE REVISIONS

SYSTEM 4

REVISION NUMBER: 2.9

RELEASE DATE: 8/22/83 to EDITEL

DESCRIPTION OF CHANGES:

1. Memory usage printout in .ANIMATE mode

2. New section parameter: .FG3X4_SEL

2 switches renamed:

.FG_2_XFG_3 → .FG2X3-3X4

.FG2XFG3_AMP → .FG2X3-3X4_AMP

EFFECT ON OLD ANIMATION: Requires updating

EFFECT ON MANUAL (SECTION # EFFECTED): 1. Yes 2. Yes

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #):

S4CS.GT UPD28.SV UPD29.SV KEYCP14.MS

New command files (because of name changes)

COMPUTER IMAGE CORP.

SOFTWARE REVISIONS

SYSTEM 4

REVISION NUMBER: 2.9+

RELEASE DATE: _____

DESCRIPTION OF CHANGES:

1. 8/24/83 Handle both PAL & NTSC video rates. No need for different EPROMS or SYSTEM4 versions.
2. 9/6/83 System4 will now always set RPU to sync to field for starting a playback whether update rate is 30 or 60/sec
3. 9/6/83 Blending of fading files fixed for cases in which beginning video frame # is not 1
4. 9/6/83 .GET compacts memory before copying the new control structure to memory
5. 9/6/83 .DISPLY-PHASE doesn't hesitate when turning a shaft encoder
6. 9/6/83 .DISPLY-PHASE & .FLIP
 - don't give 'INVALID INPUT' on <CR> only input
 - exit when a mode switch (or typed mode name) other than .ANIMATE is entered
7. 8/30/83 .MOVE-ALL-KF now functions as Expand/Contract in addition to still providing its old capability
8. 9/8/83 .ART, .STEP, & .INSERT don't give 'INVALID INPUT' on <CR> only input & exit when a mode switch (or typed mode name) other than the current mode is entered.
9. 9/23/83 Start pulse delay/jitter mostly fixed
10. 10/3/83 UPD29 fixed. (If certain parameters were attached, e.g. SEL-INTENS-CP, on entering ANIMATE mode, they would not be shown as attached, & trying to attach them gave PARAM INACTIVE - The PIC/KF offset in USFI was incorrect. Fixed by clearing the saved ST-I in <ctrl>.HT)

EFFECT ON OLD ANIMATION:

EFFECT ON MANUAL (SECTION # EFFECTED):

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #):

1. RPUCTL20.MS, TERM8.MS
9. TERM9.MS
10. UPD29.SV

COMPUTER IMAGE CORP.

SOFTWARE REVISIONS

SYSTEM 4

REVISION NUMBER: 2.9B

RELEASE DATE: _____

DESCRIPTION OF CHANGES:

1. Intensity comp. calculations changed:

RPU value of INTENS = VANISH SIZE * picture value of INTENS

IC1-9 have 1 less factor of VANISH SIZE (see listing for QRMIC.MS)

INTNS.MS no longer used

S4CS.SQ (square root table) no longer used

2. TERM10.MS - control panel controller - updated to handle modem communications

EFFECT ON OLD ANIMATION: 1 - none 2 - none

EFFECT ON MANUAL (SECTION # EFFECTED): 1 - no 2 - ?

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #):

1. INTNS.MS, S4CS.SQ obsolete. New DPLOADCS.MC

2. RCPDEB3.MS obsolete. New TERM10.MS, ECN on control panel processor card, cables, etc.

(I think QRMIC.MS also changed - Layne G.)

COMPUTER IMAGE CORP.

SOFTWARE REVISIONS

SYSTEM 4

REVISION NUMBER: 3.0

RELEASE DATE: _____

DESCRIPTION OF CHANGES:

1. .FG6-TVFLD-SNC - new section parameter
2. AUX_SIG_1-4 → .FRAME_AUX_1-4 frame parameters
.AUX_SIG_5-6 changed names to .SEC_AUX_1-2
3. Fixed bug in SPLICE (problem was in splicing fairing files at 60 or 48 or 50 updates/sec only)
4. Re-sectioning no longer required when changing VIDEO RATE if only updates/sec is changed and not # lines.
5. .SEL_INTENS_CP new maximum = 8
6. RPUCTL22.MS keeps count of h-scans from beginning of V-blank preceeding Field 1 to receipt of remote START. This count is available via the "T" command when online to the RPU. Requires wiring 6840 timer on RPU 6809 card:
#7 (C3) to #28 (C1) & #5 (G3) to GND.

EFFECT ON OLD ANIMATION: Must be updated - use UPDATE (rather than UPDANIMATION)

EFFECT ON MANUAL (SECTION # EFFECTED): 1, 2, 5 yes

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #): _____

New EPROMS/PROMS: KEYCP12, RPUADRS, RPUCTL22

New UPDATE.SV, UPD30.SV, UPD29.SV

New S4CS.GT

COMPUTER IMAGE CORP.

SOFTWARE REVISIONS

SYSTEM 4

REVISION NUMBER: 3.10

RELEASE DATE: _____

DESCRIPTION OF CHANGES:

1. 12/20/83 - Allows specification of 24 separate waveforms so that each function generator can be loaded with its own unique waveforms. Waveform names displayed for 1 function generator at a time in CONTROL mode.
2. 12/22/83 - Fixed a bug in rotational phase fairings (some fairing blocks were getting the wrong fairing type).
*manual updated to this point
3. 2/9/84 - Show "FRAME" or "FIELD" on CRT status display, depending on Video rate update rate

EFFECT ON OLD ANIMATION: requires updating with UPDATE

EFFECT ON MANUAL (SECTION # EFFECTED): 1. yes 3. yes

EFFECT ON HARDWARE/FIRMWARE (INCLUDE PART # AND ECN #):

1, 2 none

3 - RPUCTL23, TERM11

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: CHRGENP. PROM TYPE: 2716 PROM LOCATION: CIC-W-74 1C16

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: DEVDEC-- PROM TYPE: 6309 PROM LOCATION: CIC-W-60 H2

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: DEVENC. PROM TYPE: 6308 PROM LOCATION: CIC-W-60 N1

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: INTCOMPA PROM TYPE: 6331-1 PROM LOCATION: CIC-W-20 A6

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: INTCOMPB PROM TYPE: 6331-1 PROM LOCATION: CIC-W-20 C6

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: INTCOMPC- PROM TYPE: 6331-1 PROM LOCATION: CIC-W-20 E6

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: KEYCOO- PROM TYPE: 2716 PROM LOCATION: CIC-73 U3

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: KEYCP- PROM TYPE: 2732 PROM LOCATION: CIC-W-75 U8

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: MTAPE_. PROM TYPE: 2716 PROM LOCATION: CIC-W-60 L6

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: MTDEB. PROM TYPE: 2716 PROM LOCATION: CIC-W-60 44

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: RCPDEB- PROM TYPE: 2732 PROM LOCATION: CIC-W-76 DT

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: RPUADR- PROM TYPE: 6349-1 PROM LOCATION: CIC-W-65 E1
OLD NAME PROM.MS =745472

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: 1RPUCTL- PROM TYPE: 2716 PROM LOCATION: CIC-W-62 J3
FIRST HALF OF RPUCTL- PROGRAM

PROM REV#	REV DATE	CHECK SUM	COMMENTS/CHANGE DISCRIPTION
1RPUCTL0.	1/14/81		
1RPUCTL1.	10/7/81		
1RPUCTL2.	10/8/81		ADDED STATUS OUTPUT TO TERMINAL
1RPUCTL3.	10/27/81		REWORKED FOR NEW DEBUGGER
1RPUCTL4.	11/1/81		
1RPUCTL5.	3/3/82		ADDED DIAGNOSTIC TESTS AS ECL CMDS
1RPUCTL6.	3/11/82		ADDED REMOTE PAUSE
1RPUCTL7.	3/22/82		ADDED POWER UP DIAGNOSTICS
1RPUCTL8.	4/8/82		ESI MODIFIED FOR SPEED
1RPUCTL9.	4/14/82	676F	SYNCH PROBLEM IN IBELL
1RPUCTL10.	5/17/82	04BD	SAFE RASTER ON POWER UP AND DIAG. START TIMMING.
1RPUCTL11.	8/4/82	6C8D	ADDING NEW PARAMETERS TO THE RPU BUFFER
1RPUCTL12.	10/8/82		NEW VALUE FOR MASK1-RADIUS IN DFLT BUFFER
1RPUCTL13.	10/19/82		START FIELD BIT USED TO SYNC PLAYBACK START
1RPUCTL14.	10/21/82		ECLIPSE COMMAND CAN RUN DIAGNOSTICS
1RPUCTL15.	10/25/82	3674	FIXED VIDEO FR# DISPLAY - TOO SLOW ON SLOW PLAYBACK
1RPUCTL16.	4/15/83	B603	NEW VALUES FOR SIZE (A & F) & INTENSITY IN DFLT BUF (internal cksum = 361C)
1RPUCTL17.	5/6/83	AE3A	RE-INITIALIZE AFTER DMA TEST. INIT VID-RATE & DMN BEFORE DOING POWER UP DIAGNOSTICS.
1RPUCTL18.	6/6/83	B7B6	Run End-of-field interrupts off. of 6840 counter #2 (FIRQ) to fix a rare timing problem. Restore Video-rate & dinc. on button reset
1RPUCTL19.	7/29/83	B9B8	Default size=1536, intens=512
1RPUCTL20.	8/30/83	BB63	Handle both NTSC & PAL video rates
1RPUCTL21.	11/11/83	BAE6	New default frame (.AUX-SIG-1-4 → FRAME-AUX-1-4)
1RPUCTL22.	12/8/83	C38F	Keep # h-scans from v-blank preceeding field 1 to receipt of remote start. "T" command retrieves last count
1RPUCTL23.	2/9/84	C3D7	Show "FIELD" or "FRAME" on Control Panel CRT status display

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: 2RPUCTL- PROM TYPE: 2716 PROM LOCATION: CIC-W-62 M3
SECOND HALF OF RPUCTL- PROGRAM

PROM REV#	REV DATE	CHECK SUM	COMMENTS/CHANGE DISCRIPTION
2RPUCTL0.	1/14/81		<u>SAME AS 1RPUCTL--</u>
2RPUCTL1.	10/7/81		
2RPUCTL2.	10/8/81		
2RPUCTL3.	10/27/81		
2RPUCTL4.	11/1/81		
2RPUCTL5.	3/3/82		
2RPUCTL6.	3/11/82		
2RPUCTL7.	3/22/82		
2RPUCTL8.	4/8/82		
2RPUCTL9.	4/14/82	4178	
2RPUCTL10.	5/17/82	43B8	
2RPUCTL11.	8/4/82	47DA	
2RPUCTL12	10/8/82		
2RPUCTL13	10/19/82		
2RPUCTL14	10/21/82		
2RPUCTL15	10/25/82		
2RPUCTL16	4/15/83	806B	(Internal Checksum = 361C)
2RPUCTL17	5/6/83	8CE9	(Internal Checksum = 39F5)
2RPUCTL18	6/6/83	93C8	(Internal Checksum = 4A9A)
2RPUCTL19	7/29/83	932A	(Internal Checksum = 4C4B)
2RPUCTL20	8/30/83	94FE	(Internal Checksum = 4F89)
2RPUCTL21	11/11/83	946E	(Internal Checksum = 4E83)
2RPUCTL22	12/8/83	A8D9	(Internal Checksum = 6AFF)
2RPUCTL23	2/9/84	A83A	(Internal Checksum = 6B53)

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: 1RPUDEB- PROM TYPE: 2716 PROM LOCATION: CLC-W-62 R3
FIRST HALF OF RPUDEB- PROGRAM

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: 2RPUDES PROM TYPE: 2716 PROM LOCATION: C1C-W-62 U3
SECOND HALF OF RPUDES-- PROGRAM

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: RPUCON- PROM TYPE: 6331-1 PROM LOCATION: CIC-W-65 T1

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: TERM-. PROM TYPE: 2732 PROM LOCATION: CIC-W-75 U9

[illegible]

PROM HISTORY

COMPUTER IMAGE CORP.

PROM BASE NAME: 2TERM - PROM TYPE: 2732 PROM LOCATION: CIC-W-76 DT

[illegible]